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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,104	12/05/2001	Joseph Ho	MR2349-74i	2168

4586 7590 11/21/2002

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ELLICOTT CITY, MD 21043

EXAMINER

POKER, JENNIFER A

ART UNIT PAPER NUMBER

2832

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/002,104

Applicant(s)

HO, JOSEPH

Examiner

Jennifer A. Poker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant incorporates a functional limitation with no support. Therefore, with the wording of claim 1 and by observing the illustration of the core and winding as claimed, it was understood that any core with a coil winding would perform the same function. Prior art was applied accordingly.

Furthermore, the functional recitation that the coil winding has the functions of an inrush current limiter, a fusible link, and an EMC choke, has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 U.S.C. 112 sixth paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929, C. S. 172; 388 O.G. 279.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant states that the ferromagnetic core of the device of claim one has a high resistivity and a high permittivity. It was not understood how a magnetic core, which transfers electrical current, would have properties of high resistivity and that of a dielectric material (permittivity).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Number 4,057,774 to Arikawa, et al.

Arikawa, et al, discloses a fuse, which may be employed in or separated from different electrical and electronic circuits, comprising:

- (1) A core member, made from a highly heat conductive material (a sintered blend of aluminum oxide and magnesium oxide spinel), (Abstract)
- (2) A wire strand spirally wound on the core member, which is made by winding a first metallic wire element over a second mutually fusible wire. (Abstract)

Because applicant did not specify in claim one as to how the functions of “an inrush limiter, a “fusible link”, and an “EMC choke”, it was understood by the claim and the illustrations that it would be inherent that any structure with a core and winding would perform those functions.

In reference to claim 5, Arikawa, et al, discloses the claimed invention except for a winding comprising a first coil and a second coil, both differing in the number of turns. It would have been an obvious to one with ordinary skill in the art at the time the invention was made to incorporate more than winding with different number of turns since it is well known in the art that energy storage or transmission devices may incorporate several windings (primary, secondary, etc.) with a small to a large number of turns.

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6. Claims 2 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 4,057,774 to Arikawa, et al, in view of U.S. Patent Number 3,573,676 to Mayer.

Arikawa, et al, discloses the claimed invention except for the protection layer covering the surface of the core and coil structure; the core having a high resistivity and permittivity.

Mayer discloses a device for transmitting electrical energy (conductive element) comprising a conductive winding having a certain ohmic resistance being wound on a core and covered with a resistive external sheath. In addition, the core has high permeability and permittivity. The conductive element is characterized by a distribution in the radial direction of at least one of the parameters resistivity, permeability and permittivity of the materials forming the said conductive element. (Figure 17) (Column 9, lines 9-13 and lines 22-23)

One skilled in the art, at the time the invention was made, would have found it obvious to combine the teachings of Arikawa, et al, with the teachings of Mayer, to incorporate a core with resistivity and permittivity in order to reduce the current density at the surface to the advantage of current passing inside the conductive winding. The external sheath would be added for the purpose of insulating and protecting the unit.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Poker whose telephone number is 703-305-4037. The examiner can normally be reached on 6:00-3:30, Mon.-Fri. (alternating Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John G. Enad can be reached on 703-308-7619. The fax phone numbers for the organization

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where this application or proceeding is assigned are 703-308-3432 for regular communications and 703-746-8181 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

jap  
November 15, 2002

  
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